

What is claimed is:

1. A method for fabricating a seal-integrated separator for a fuel cell, said seal-integrated separator including a separator body and an inner seal and an outer seal which are integrated on both sides of said separator body and which are disposed, side by side, around an electrode's reaction surface during use, comprising the steps of:
  - forming a through hole in said separator body;
  - providing a first mold having grooves respectively positioned corresponding to said inner and outer seals disposed on one side of said separator body, a connecting cavity for forming a seal bridge at least partially connecting said inner and outer seals to each other at a position corresponding to said through hole, and at least one gate communicating with each of said grooves, and a second mold having grooves respectively positioned corresponding to said inner and outer seals disposed on the other side of said separator body, and a connecting cavity for forming a seal bridge at least partially connecting said inner and outer seals to each other at a position corresponding to said through hole;
  - holding said separator body between said first mold and said second mold; and
  - injecting melted seal material to form said seals into each of said grooves in said first mold by supplying said melted seal material into said gate and injecting a portion of said melted seal material into each of said grooves in said second mold via said through hole.
2. A method according to claim 1, wherein said melted seal material is separately supplied into each of said grooves corresponding to said inner and outer seals.

3. A method according to claim 2, wherein said gate is connected to a portion of said groove, said portion forming a sealing surface of said seals.
4. A method according to claim 2, wherein said gate is connected to a portion of said groove, said portion not forming a sealing surface of said seals.
5. A method according to claim 1, wherein said gate is connected to said connecting cavity.
6. A method according to claim 1, wherein wraparound cavities are formed in said first and second molds so that said melted seal material flows so as to be supplied via the periphery of said separator body held between said first and second molds.
7. A method according to claim 1, wherein said step of holding said separator body between said first mold and said second mold includes supporting at least one side of said separator body by a support fixture.
8. A method for fabricating a seal-integrated separator for a fuel cell, said seal-integrated separator including a separator body having a communication port, and seals which are integrated on both sides of said separator body and which are disposed around an electrode's reaction surface during use and around said communication port, comprising the steps of:
  - forming a through hole in said separator body;
  - providing a first mold having a groove positioned corresponding to said seal

disposed on one side of said separator body, a first gate communicating with said groove, and a second gate separately formed from said first gate so as to directly communicate with said through hole, and a second mold having a groove positioned corresponding to said seal disposed on the other side of said separator body and communicating with said through hole;

holding said separator body between said first mold and said second mold and making said second gate directly communicate with said through hole; and

injecting melted seal material to form said seals into said groove in said first mold by supplying said melted seal material into said first gate, and injecting said melted seal material into said groove in said second mold via said through hole by supplying said melted seal material into said second gate.

9. A method for fabricating a seal-integrated separator for a fuel cell, said seal-integrated separator including a separator body and an inner seal and an outer seal which are integrated on both sides of said separator body and which are disposed, side by side, around an electrode's reaction surface during use, comprising the steps of:

forming a through hole in said separator body;

providing a first mold having grooves respectively positioned corresponding to said inner and outer seals disposed on one side of said separator body, a connecting cavity for forming a seal bridge at least partially connecting said inner and outer seals to each other at a position corresponding to said through hole, a first gate communicating with each of said grooves, and a second gate separately formed from said first gate so as to directly communicate with said through hole, and a second mold having grooves respectively positioned corresponding to said inner and outer seals disposed on the other

side of said separator body, and a connecting cavity for forming a seal bridge at least partially connecting said inner and outer seals to each other at a position corresponding to said through hole;

holding said separator body between said first mold and said second mold and making said second gate directly communicate with said through hole; and

injecting melted seal material to form said seals into said connecting cavity and into each of said grooves in said first mold by supplying said melted seal material into said first gate, and injecting said melted seal material into said connecting cavity and into each of said grooves in said second mold via said through hole by supplying said melted seal material into said second gate.

10. A method according to claim 1, wherein said melted seal material is separately supplied into each of said grooves corresponding to said inner and outer seals.

11. A method according to claim 10, wherein said first gate is connected to a portion of each of said grooves, said portion forming a sealing surface of said seal.

12. A method according to claim 10, wherein said first gate is connected to a portion of each of said grooves, said portion not forming a sealing surface of said seal.

13. A method according to claim 9, wherein said step of holding said separator body between said first mold and said second mold includes supporting at least one side of said separator body by a support fixture.